REMARKS

Claims 1-15, 17 and 21 have been canceled, claims 16 and 18-20 have been amended, and new claims 22-26 have been added. Upon entry of this amendment, claims 16, 18-20, and 22-26 will be pending in the application.

Applicant reserves the right to file a divisional application directed to the subject matter of the canceled claims.

Applicant wishes to thank the Examiner for the helpful comments and guidance provided in the Office action.

Rejection under 35 U.S.C. § 112

Applicant respectfully requests reconsideration of the rejection of claims 16-20 under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention.

Independent claim 16 and dependent claims 18-20 have been amended in conformity with the disclosure in the original specification for greater clarity and to particularly point out and distinctly claim the subject matter of the invention. More particularly, claim 16 is directed to a system for reducing the release of exhaust gases selected from carbon monoxide, smoke and mixtures thereof from an indoor combustion device into the interior of a building housing the combustion device. The system comprises an air intake mounted on a roof or exterior wall of the building; an air pump in fluid communication with the air intake to draw outdoor air into the building through the air intake when the air pump is activated; a connecting conduit in fluid communication with the air pump to convey air from the air intake to an indoor outlet in the building and increase the building internal pressure when the air pump is activated; a carbon monoxide or smoke detector located within the building that generates a signal in response to the concentration of carbon

monoxide or smoke in the building exceeding a threshold value; and a receiver for receiving the signal generated by the detector, the receiver turning on a switch to activate the air pump when the signal is received from the detector.

The phrases "such as" and "preferably" in the original claims, which were deemed to render the claims indefinite, have been removed from the claims as amended.

Rejection under 35 U.S.C. § 103

Applicant respectfully requests reconsideration of the rejection of claims 16-20 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,171,773 ("Preston") in view of U.S. Patent No. 6,283,851 to Smith et al. ("Smith").

In order to establish a *prima facie* case of obviousness, it is incumbent upon the Office to show that the cited art teaches or suggests all the claim limitations, that there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings and that there must be a reasonable expectation of success. Applicant respectfully submits that a *prima facie* case of obviousness is lacking with respect to the invention as now defined in the pending claims.

As noted above, claim 16 as amended is directed to a system for reducing the release of exhaust gases such as carbon monoxide and/or smoke from an indoor combustion device into the interior of a building housing the combustion device. The system comprises an air intake mounted on the exterior of the building; an air pump in fluid communication with the air intake; a connecting conduit in fluid communication with the air pump to convey air from the air intake to an indoor outlet in the building; a carbon monoxide or smoke detector located within the building; and a receiver for turning on a switch to activate the air pump. In operation of the system, the detector generates a

signal in response to the concentration of carbon monoxide or smoke in the building exceeding a threshold value. The signal is received by the receiver which turns on a switch to activate the air pump when the signal is received from the detector. Once activated, the air pump draws outdoor air into the building through the air intake, connecting conduit and indoor outlet, thereby increasing the building internal pressure to evacuate exhaust gases such as carbon monoxide and smoke from the interior of the building housing the combustion device (e.g., by forcing the exhaust gases to exit the building through the chimney of the combustion device).

Preston discloses a heat exchanger surrounding the exterior of an exhaust stack or chimney of a combustible fuel-burning system in order to make use of heat energy typically wasted as exhaust gases from the heating apparatus exit through the chimney. A motorized blower draws outside air through a heat exchanger conduit surrounding the chimney and containing heat conducting material to warm the air flowing into the building by indirect heat transfer with the exhaust gases in the chimney. Activation of the motor that drives the blower is achieved using an ordinary type of on-off thermostatic electric switch in thermal contact with a transition conduit that passes exhaust gases from the heating apparatus to the chimney. When the exhaust gases heat the thermostatic switch above a predetermined minimum temperature, the motor for the blower is turned on by the switch.

As noted in the Office action, Preston fails to teach or suggest the system of claim 16 including a carbon monoxide or smoke detector that generates a signal in response to elevated concentrations of carbon monoxide or smoke within the building and a signal receiver for turning on the blower in response to the signal from the detector. In contrast to the present invention, the blower activating mechanism described in Preston fails to adequately and safely protect the occupants of a

building from dangerous exhaust gases such as carbon monoxide and smoke because the blower only operates when the heating apparatus heats the thermostatic switch above a predetermined temperature. Indoor combustion devices or burners that combust a fuel (e.g., stoves, furnaces, fireplaces or boilers), can emit carbon monoxide and smoke prior to the device and the associated surfaces reaching a predetermined temperature as well as after combustion has been extinguished and the temperature of the device decreases below a predetermined temperature. The system disclosed by Preston is incapable of pressurizing a building space to adequately ventilate these harmful gases during temperature transitions below the threshold necessary to activate the blower.

The shortcomings of the primary reference with respect to the invention defined in claim 16 cannot be overcome by resort to Smith.

In contrast to waste heat recovery that underlies the system disclosed by Preston, Smith is directed primarily to a sophisticated make-up air control system designed to equilibrate or balance the air pressure within a controlled building space and the outside environment when one or more exhaust producing appliances are operated in the building. The control system of Smith is intended for use in a "smart" building in which the operation of multiple exhaust producing appliances, such as furnaces, water heaters, wood burning equipment and exhaust fans is continuously monitored using sensors. Accordingly, it is difficult to surmise any suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the heat recovery system described in Preston with the teachings of Smith.

Furthermore, in Smith, the blower that is operated to draw make-up air into the building is turned on in conjunction with the activation of the first exhaust producing appliance within the building and runs continuously at variable speeds determined

by the control system and then is turned off or deactivated once the exhaust producing appliance(s) is (are) deactivated (See col. 2, lines 33-53; col. 3, lines 40-43; and the control logic set forth at col. 4, line 55 to col. 5, line 11). That is, the operation of the make-up air blower in Smith is interlocked with the activation/deactivation of the exhaust producing appliance(s) and is not turned on in response to a signal received from a carbon monoxide or smoke detector as called for in the instant claims. The reference to possible inclusion of a carbon monoxide detector in the system of Smith at col. 5, lines 46-54 cited in the Office action, discloses that the carbon monoxide detector "can be used to provide **maximal** supplemental air if appropriate," presumably, for example, by increasing the speed of the make-up air blower already turned on in response to the activation of a exhaust producing appliance. However, as noted above, in all of the operational scenarios disclosed by Smith, the blower of the make-up air apparatus is turned on when the first exhaust producing appliance within the building is activated and is deactivated once all the exhaust producing appliance have been deactivated. Accordingly, similar to the heat recovery system of Preston, Smith's make-up air apparatus fails to provide adequate protection against the release of carbon monoxide and other harmful gases to the occupants of the building during times when all exhaust producing appliances are deactivated.

The requirement of a receiver that turns on a switch to activate the air pump in response to the signal generated by the carbon monoxide or smoke detector as called for in claim 16 is not present in either Preston or Smith. In light of the shortcomings in the teachings of the cited references, a *prima facie* case of obviousness is lacking with respect to the invention defined in claim 16. Claims 18-20 and new claims 22-26 that depend from claim 16 are likewise submitted as patentable over the cited references.

In view of the above, favorable reconsideration and allowance of all pending claims are respectfully solicited.

The Commissioner is requested to charge any fee deficiency in connection with this response to Deposit Account No. 19-1345.

Respectfully submitted,

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